

App. No. 09/972,167
Amdt. Dated February 24, 2005
Reply to Office Action of November 29, 2004

REMARKS

This is a full and timely response to the non-final Office action mailed November 29, 2004. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-7, 9-19, 21-25, and 27-30 are now pending in this application, with Claims 1, 11, 22, and 28-30 being the independent claims. Claims 1, 11, 21, 22, and 28-30 have been amended, and Claims 8, 20, and 26 have been canceled herein. No new matter is believed to have been added.

Objections to the Drawings

The drawings were objected to as failing to comply with 37 C.F.R. § 1.84(p)(4). Specifically, reference numeral "440" was used to designate two different items. In response, Applicant has included herewith an amended drawing sheet that obviates this objection. As such, reconsideration and withdrawal of the drawing objection is requested.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 8 and 20-27 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. In response, Applicant has canceled Claims 8 and 20, and has amended independent Claim 22 to even more clearly define the invention.

In view of the foregoing, reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph are respectfully solicited.

Rejections Under 35 U.S.C. § 103

Claims 1-3, 6-9, 11-13, and 16-30 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent Nos. 5,414,462 (Veatch), 4,220,994 (Hendrickson), and 6,266,452 (McGuire), and Claims 4, 5, 14, and 15 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Veatch, Hendrickson, McGuire, and U.S. Patent No. 3,748,644 (Tisdale). These rejections are respectfully traversed.

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Independent Claim 1 relates to a method for geographically referencing an improvement image, independent Claim 11 relates to a method for converting an improvement image to a geographically referenced image, and independent Claim 22 relates to a method for combining an improvement image with geographically referenced information to produce a composite image. The methods encompassed by each of these independent claims include extracting image positions of at least two image reference points that depict features having known geographic positions, interpreting geographic positions for the features, and independent Claims 1, 11, and 22 each recite, *inter alia*, computing a geographic distance between the features, determining a geographic direction between the features, computing an image distance between the features, and determining an improvement image scale factor based on the computed geographic distance between the features and the computed image distance between the features.

Independent Claims 28-30 relate to a system for geographically referencing an improvement image, a system for converting an improvement image to a geographically referenced image, and a system for combining an improvement image with geographically referenced information, respectively, each of which includes a processor for implementing the methods of independent Claims 1, 11, and 22, respectively.

Vaetch relates to a system and method for generating land survey maps that include both image data and survey data, and discloses digitizing an aerial photograph of a geographic survey region to form a digital image thereof, and displaying the digital image on a display unit for identification and marking of fixed ground reference points. More specifically, an operator, using an interface device, marks each of the fixed ground reference points and enters their known longitude, latitude, and elevation. A processing unit then correlates the operator-entered data with the digital image data to generate an image base map for the geographic survey area that is corrected to represent a true planimetric image of the geographic survey area, and stores the image base map in the memory unit. Alternatively, the fixed reference points can also be automatically identified in lieu of manual identification and marking by an operator (col. 4, ll. 32-56).

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It is clear from the above, and was readily admitted to in the Office action, that Vaetch fails to disclose one or more of the above-noted features of independent Claims 1, 22, 22, and 28-30. Namely, Vaetch fails to disclose (or even remotely suggest) at least computing the geographic distance and direction between the features, computing an image distance between the features, and determining an improvement image scale factor based on the computed geographic distance between the features and the computed image distance between the features. To make up for these deficiencies, the Office action cites Hendrickson and McGuire; however, without admitting that Vaetch discloses what the Office action alleges, Applicant submits neither of these citations, either solely or in combination, make up for the deficiencies of Vaetch.

Hendrickson relates to a system and method for assisting pilots in performing preflight and in-flight navigation planning and computations, and discloses that the system implements five mathematical subroutines to resolve various navigational problems. For example, during flight plan preparation the pilot obtains detailed information about the destination airport, the departure airport, and any other airport on the itinerary. The system extracts the latitude and longitude of each airport from a data base and, using these data, determines distances and headings between these airports.

McGuire relates to a method of registering images and discloses recovering a scale factor or a set of potential scale factors that includes the actual scale factor. To do so, the images are first mapped into a translation and rotation invariant space, and a "scale signature" is computed for the image. After filtering and detecting steps, one or more potential scale factors is recovered.

From the above it is clear that neither Hendrickson nor McGuire make up for any of the above-noted deficiencies of Vaetch. Specifically, while Hendrickson discloses determining distances and headings between these airports, it provides no teaching that even remotely suggests computing a geographic distance between image reference points that depict features, or determining a geographic direction between image reference points that depict features. Indeed, Hendrickson is not even related to image processing techniques whatsoever, nor is it even pertinent to the problem Applicant is solving. As

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such, no matter the alleged teaching, Hendrickson does not even qualify as analogous art. See In re Octiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). Moreover, while not conceding that McGuire even remotely suggests obtaining a scale factor, in the context of the as-filed claims, it is nonetheless clear that McGuire fails to disclose, or even remotely suggest, determining an improvement image scale factor based on the computed geographic distance between the features and the computed image distance between the features, as is now recited in the independent claims.

In view of the foregoing, Applicant submits that none of Veatch, Hendrickson, or McGuire, either alone or in any combination thereof, suggests at least the features recited in independent Claims 1, 11, 22, or 28-30. Furthermore, Tisdale and the other art of record have been reviewed and are not understood to make up for the deficiencies of these citations. As such, Applicant requests reconsideration and withdrawal of the § 103 rejections.

Conclusion

Based on the above, independent Claims 1, 11, 22, and 28-30 are patentable over the citations of record. The dependent claims are also submitted to be patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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